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June 08, 2019

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street S.W.
Washington, D.C. 20554

**Re: Response to Comments on Preliminary Cost Category Schedule
WT Docket No. 18-122**

Dear Ms. Dortch:

Maxar Technologies Holdings Inc. (“Maxar”), a leading global provider of integrated, advanced space technology solutions for its commercial and government customers, hereby responds to the comments filed by Eutelsat S.A. (“Eutelsat”) regarding the cost estimates for new spacecraft that were provided for in the *3.7 GHz Transition Preliminary Cost Category Schedule of Potential Expenses and Estimated Costs* (“Cost Catalog”).¹ Maxar agrees that the Commission should limit reimbursement of relocation costs only to equipment necessary to facilitate the transition of C-band spectrum.² However, going further to prohibit the purchase of hybrid satellites would be wholly inconsistent with FCC precedent and policy.

First, the C-band Order explicitly contemplates that incumbent satellite operators may purchase equipment that includes functionalities beyond what is necessary to accomplish the C-band clearing process, holding “if an incumbent builds additional functionalities into replacement equipment that are not needed to facilitate the swift transition of the band, it must reasonably allocate the incremental costs of such additional functionalities to itself and only seek reimbursement for the costs reasonably allocated to the needed relocation.”³ This follows Commission precedent from the broadcast incentive auction, where eligible TV stations and MVPDs could “elect to purchase optional equipment capability or make other upgrades at their own cost, but only the cost of the equipment without optional upgrades [was] a reimbursable expense.”⁴

¹ See 3.7 GHz Transition Preliminary Cost Category Schedule of Potential Expenses And Estimated Costs, §II (April 27, 2020) (“Cost Catalog”); *included as an attachment to Public Notice, Wireless Telecommunications Bureau Seeks Comment On Preliminary Cost Category Schedule For 3.7-4.2 GHz Band*, DA 20-457 (April 27, 2020).

² Comments of Eutelsat S.A., GN Docket No. 18-122, at 1 (May 14, 2020) (“Eutelsat Comments”); *ex parte* of The Boeing Company, GN Docket No. 18-122, at 1 (filed May 28, 2020) (“Boeing Ex Parte”); *see also Expanding Flexible Use of the 3.7 to 4.2 GHz Band*, GN Docket No. 18-122, Report and Order and Order of Proposed Modification, FCC 20-22 (March 3, 2020) (“C-band Order” or “Order”).

³ *C-Band Order*, ¶ 194

⁴ *Id.*

Thus, where satellite operators do elect to design a satellite with multiple capabilities, the Commission’s long-standing policy on allocation of incremental costs sufficiently can govern reimbursement claims.⁵ Maxar has substantial experience designing and building hybrid satellites with multiple payloads and allocating incremental costs among several responsible parties. Attributing incremental costs to additional functionalities, as Boeing previously explained, is a standard practice among satellite manufacturers.⁶ There is no reason for the Commission to prevent incumbent C-band satellite operators from purchasing equipment with additional functionality at their own proportionate expense.

Second, Commission precedent permits displaced service providers to acquire “comparable facilities” to facilitate the transition from the old to the new spectrum bands.⁷ Under the *C-band Order*, this includes the purchase of several new space stations by operators to replace the 300 MHz worth of capacity lost on currently on-orbit spacecraft.⁸ Despite Eutelsat’s interpretation to the contrary,⁹ this precedent is clear that the “comparable facilities” standard does not require an operator to purchase an exact duplicate of its current equipment. Rather, the courts have held that operators must ensure that “replacement facilities are equivalent to the existing...facilities with respect to throughput, reliability, and operating costs.”¹⁰ By focusing on throughput, reliability, and operating costs—rather than, say, the platform or payload configuration—the courts have safeguarded operational flexibility for service providers to continue to assess and determine the best means by which to provide uninterrupted service to their customers without degrading service or driving up cost to the taxpayer.

While the *C-band Order* provides that the new satellites are to “support more intensive use of the 4.0-4.2 GHz band after the transition,”¹¹ there is nothing in the *Order* that restricts the design of these new spacecraft to single-service C-band payloads.¹² As Eutelsat recommended in its own C-band transition proposal, eligible satellite operators should have the “flexibility to determine

⁵ *C-Band Order*, ¶ 194; Boeing Ex Parte at 3.

⁶ *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions, Report and Order*, 29 FCC Rcd. 6567, ¶ 624 (2014).

⁷ See e.g., *Amendment of Section 2.106 of the Commission’s Rules to Allocate Spectrum at 2 GHz for Use by the Mobile-Satellite Service*, Second Report and Order and Second Memorandum of Opinion and Order, 15 F.C.C.R. 12, 315 ¶ 109 (2000) (“*2 GHz MSS Relocation Order*”) (holding that Commission “consider[s] it essential that the process not disrupt the communications services provided by the existing ... operations”) (citing *Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies*, Third Report and Order and Memorandum Opinion and Order, 8 F.C.C.R. 6589, 6594 ¶ 13 (1993) (“*Emerging Technologies Order*”).

⁸ See *C-band Order*, ¶ 199.

⁹ Eutelsat Comments at 2-3.

¹⁰ *Teledesic LLC v. F.C.C.*, 275 F.3d 75, 85 (D.C. Cir. 2001).

¹¹ *C-band Order*, ¶ 199.

¹² See generally *C-band Order*.



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what comparable facilities (*e.g.*, new C-band satellites, Ku-band satellites, etc.) would meet its business needs and the needs of its customers.”¹³

Again, this does not mean that satellite operators can or should be able to recover costs for every additional capability included on the satellite purchased for the primary purpose of clearing the C-band. Like Boeing, Maxar responded to the Cost Catalog development questions with the understanding that the estimates would only cover spacecraft designed to facilitate more intensive use of the 4.0-4.2 GHz band within the continental United States. These estimates reflect reasonable and legitimate variables associated with the significantly accelerated build and launch timelines to ensure the C-band clearing deadlines are met.¹⁴ And while existing inventory and part availability may ultimately influence some of the design decisions as a result of these accelerated timelines,¹⁵ Commission precedent has already recognized that this is a “legitimate byproduct of a process whereby important...services are uprooted against their will to accommodate newer technologies.”¹⁶

Third, prohibiting the use of hybrid satellites in the C-band clearing process would be inconsistent with other Commission policies, such as improving the efficient use of space and mitigating orbital debris.¹⁷ Permitting satellite operators to construct and launch hybrid satellites reduces the need for collocating satellites in geostationary orbital slots and the number of orbital launches, thereby reducing the overall risks to the long-term sustainability of the orbital environment.

Finally, the Commission should also dismiss Eutelsat’s suggestion that reimbursement costs should be restricted to satellite operations that can only provide coverage to CONUS, as this promotes an irresponsible use of on-orbit resources incompatible with FCC policy.¹⁸ Had the Commission intended to limit space station relocation costs in a similar vein to earth stations, it would have expressly done so. However, to do so would fail to comprehend the very nature of geostationary orbit satellites, which can “see” one-third of the earth at any given time. To require an operator to construct and launch a single-use, geographically-limited satellite to operate over a twenty-year lifetime would be a colossal waste of taxpayer dollars and entirely inconsistent with the Commission’s policies on the responsible use of space, debris mitigation, and fleet management.

¹³ Letter from Carlos M. Nalda, LMI Advisors, for Eutelsat S.A., to Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122, Att. Pg. 9 (filed Jan. 27, 2020).

¹⁴ See Boeing Ex Parte at 2; Cost Catalog at 2-3.

¹⁵ See Boeing Ex Parte at 2.

¹⁶ *Teledesic* at 86.

¹⁷ See generally, *Mitigation of Orbital Debris in the New Space Age*, Report and Order and Further Notice of Proposed Rulemaking, FCC 20-54, IB Docket 18-313 (Apr. 24, 2020).

¹⁸ Eutelsat Comments at 3 n. 7.



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Therefore, the Commission should affirm that the selection of a hybrid satellite platform is the reasonable and legitimate prerogative of the satellite operator in carrying out its obligations under the *C-band Order*. Moreover, the Commission should affirm that the range of satellite manufacturing cost information contained in the preliminary Cost Catalog is “presumptively reasonable” for the purposes of seeking reimbursement from the Clearinghouse during the C-band clearing process.¹⁹

Please contact the undersigned with any questions.

Respectfully submitted,

A handwritten signature in blue ink, reading "Paul N. Estey".

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¹⁹ *C-band Order*, ¶ 210.